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ABSTRACT

The purpose of this Mississippi study was to determine if there was a correlation significantly different from zero between test scores, level of accreditation (Level 1--the 17 highest-scoring public school districts in the study, or Level 2--the 18 lowest-scoring), district expenditure per pupil, district size, and eligibility of students for free/reduced lunches as measured by the Basic Skills Assessment (BSAP), the Functional Literacy Examination (FLE), and the Stanford Achievement Test (SAT). All three tests measured reading and math. The BSAP and the FLE measured written communication. The SAT measured language. The BSAP was administered in grades 3, 5, and 8; the FLE was administered in grade 11; and the SAT was administered in grades 4 and 6. Overall, the results showed that the best predictor for reading was reading, the best predictor for math was math, and the best predictor for written communication or language was written communication or previous language test scores. However, the second best predictor for the Functional Literacy Examination scores was the eligibility of the student for free/reduced lunches in the district. There are 12 tables and a list of 13 references. (LMI)

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Probationary Public School Districts Using Selected Variables After Remediation

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Statement of the Problem

The problem of this study was to investigate if there was a correlation that was significantly different from zero between test scores, level of accreditation (Level 1 or Level 2), district expenditure per pupil, district size, and eligibility of students for free/reduced lunches as measured by the Basic Skills Assessment Program, the Functional Literacy Examination, and the Stanford Achievement Test.

Rational

During the past fifty years, educational systems in the United States have been challenged by the public to provide a better education for its students. Numerous criticisms of the public schools have been issued to educators by parents, school boards, legislators, governors, and even presidents. Controversial theories of education have figured into these criticisms. The public in the 1960s and the 1970s demanded schools be held accountable for students' learning because it was discovered that some high school graduates were deemed functionally illiterate. Concerned citizens wanted assurance that all students were getting a quality education (Salganik, 1985). Complaints from businesses, colleges, and the military ranged from students' inabilities to complete job applications to their deficiencies in numeracy skills. Many states linked compensatory funding for districts with low scoring students. The public perceived basic skills in schools as declining, social promotion being accepted, and the diploma not ensuring literacy. The Scholastic Aptitude Test scores were declining and taxpayers wanted to know what they were getting for their tax dollar (Madaus, 1985).

In the late 1970s, the public focused its attention on two areas of education: minimum competency skills acquisition and standardized tests to measure a school's or district's quality of education measured by standardized tests (Salganik, 1985). Business and industry leaders, along with the general public, felt that the high school diploma did not guarantee the graduate to be competent in the basic skills (Gilman,

1978). Standardized test were viewed as creditable, accurate, and fair measures of educational quality. Also, the public and media trusted educational achievement that could be substantiated with measurement of standardized tests (Steelman & Powell, 1985). Standardized tests were used to study the gains and the losses of student achievement made from the previous year within a school or district and, consequently, were used by the public to judge the quality of teaching and leadership (Serow & Jackson, 1983).

In response to its public's demand for better schools, the Mississippi Legislature passed the Educational Reform Act in 1982. It mandated an accreditation system for schools that was related to measure instructional effectiveness, to rate schools, and to monitor their continued performance. Instructional effectiveness was measured using the Basic Skills Assessment Program (BSAP) in grades 3, 5, and 8, the Functional Literacy Examination (FLE) in grade 11, and the Stanford Achievement Test (SAT) in grades 4 and 6. All three assessments measured reading and math. The BSAP and the FLE measured written communication and the SAT measured language. Accreditation levels from 1 to 5 were adopted with 1 being the lowest level. The Educational Reform Act required a state response on inadequate performance. (Mississippi State Department of Education, 1990).

According to the Mississippi State Department of Education (1990), in 1988 the Commission on School Accreditation assigned 17 school districts to the Level 1 status. These assignments were based on the BSAP, the SAT, and the FLE. A remediation plan, based upon the district program and the results of the test data, was written by each district. The State Department of Education worked with these districts and directed the remediation process. The process indicated that the Level 1 districts improved in student achievement in the 1988 testing program. However, other districts also showed improvement.

Numerous studies have been done on factors within a school district which influence student achievement. One factor is the size of the district. A study by the Illinois State Department of Education (1984) found that in high schools, with more than 215 students, higher performance of student achievement was reported. Walstad (1984), agreeing with the Illinois study, found that when the school district's

size increased, the percentage of students that passed basic skills tests significantly improved. The next two factors, the eligibility of students for free/reduced lunches and the expenditure per student, could be used as descriptors of the socio-economic level. Port (1979) found that students who score higher on tests tend to come from higher socio-economic status than did students with lower scores. In the governors' report, Time for Results (1986), it is stated that in the near future one-fourth of the population of out schools will live in poverty. Currently, there is an increase in the number of eligible students for free/reduced lunches. In the 1987-88 school year in Mississippi, the total number of students on free/reduced lunches was 70% (Mississippi State Department of Education, 1987).

Test data and other district variables should be studied and evaluated in determining a district's accreditation level. The size of the district, the level of accreditation, the local expenditure per student, and the percent of students eligible for free/reduced lunches are the additional variables this study investigates.

Procedure

The State Department of Education identified the 17 Level 1 and the lowest 18 Level 2 public school districts used in this study. All the public school districts used in this study except three included the grades 3, 4, 5, 6, 8, and 11. All three of these public school districts were Level 1 schools. Two districts were high schools only, and one was an elementary school. Four public school districts in level 2 met the same percentage of minimum performance. Rather than excluding any of these from the study, all four were used. Composite Basic Skills Assessment Program scores in grades 3, 5, and 8, Functional Literacy Examination scores in grade 11, and the Stanford Achievement Test scores in grades 4 and 6 were obtained from the Division of Test and Measurement of the Mississippi State Department of Education. Each school district's size and local expenditure per student were obtained from the Bureau of Assessment and Compliance Testing and Information Management department of the Mississippi State Department of Education. The percent of students eligible for free/reduced lunch

in each public school district was obtained from the Bureau of School support Division of Child Nutrition department of the Mississippi State Department of Education.

Definitions

Level 1: school districts that have failed to comply with at least 70% of the established performance standards. (Mississippi State Department of Education, 1988b)

Level 2: school districts that have met between 70 and 99% of the established performance standards. (Mississippi State Department of Education, 1988b)

Local expenditure per student: the total local revenue from all fund types, less capital project and debt service, divided by the average daily attendance of the district. (Mississippi State Department of Education, 1987)

Eligibility for free/reduced lunch: the students who qualify for free and reduced lunches according to the federal and state child nutrition program guidelines which base eligibility on the monthly income and number of family members. (Mississippi State Department of Education, 1988a)

5.Remediation plan: concentrated on five major areas: finance; curriculum/instruction; basic skills, academic reward, college core, and at-risk students; evaluation of staff; and community involvement.

Findings

The data were analyzed using multiple regression. This study sought to determine whether a significant correlation existed between test scores and district's total expenditure per pupil, district size, accreditation level, and the eligibility of students for free/reduced lunches. All the variables were used in the multiple regression analyses and concluded the following significant relationships:

The significant predictor of the BSAP 5th grade reading scores was found to be the 3rd grade reading BSAP scores.

The significant predictor of the BSAP 5th grade math scores was found to be the 3rd grade BSAP math scores.

Two factors were identified as the best predictors of the BSAP 5th grade written communication scores. The BSAP 3rd grade written communication scores and the SAT 4th grade language scores describe these factors.

The significant predictor of the BSAP 8th grade reading scores was found to be the BSAP 5th grade reading scores.

The significant predictor of the BSAP 8th grade math scores was found to be the BSAP 5th grade math scores.

Two factors were found to be significant predictors of the BSAP 8th grade written communication scores. The BSAP 5th grade written communication scores and the SAT 6th grade language scores were these factors.

Two factors were identified as the best predictors of the SAT 6th grade reading scores. These factors were the SAT 4th grade reading scores and the BSAP 5th grade reading scores.

Two factors were found to be significantly predictors of the SAT 6th grade math scores. The BSAP 3rd grade math scores and the level of accreditation were the two factors.

The SAT 6th grade language scores had two significant predictors. The SAT 4th grade language scores and the 5th grade BSAP written communication scores were these factors.

Two factors were found to be significant predictors of the FLE reading scores. These were the SAT 6th grade reading scores and the eligibility of students for free/reduced lunches in the district.

Two factors related significantly and were identified as the best predictors of the FLE math scores. The factors were the BSAP 5th grade math scores and the eligibility of students for free/reduced lunches in the district.

Three factors were found to be significant predictors of the FLE written communication scores. The SAT 6th grade language scores, the eligibility of students for free/reduced lunches in the district, and the accreditation level of the district were the factors.

Table 1

PREDICTORS OF THE 1988 FIFTH GRADE BASIC SKILLS ASSESSMENT PROGRAM READING SCORES

Variable	Multiple R	R^2	BETA	F	Significance
BSAP 3 Reading	.9970	.9940	1.00	5451.39	.000*

*Significant at the .05 level

Table 2

PREDICTORS OF THE 1988 FIFTH GRADE BASIC SKILLS ASSESSMENT PROGRAM MATH SCORES

Variable	Multiple R	R^2	BETA	F	Significance
BSAP 3 Math	.9968	.9936	1.00	5151.82	.000*

*Significant at the .05 level

Table 3

PREDICTORS OF THE 1988 FIFTH GRADE BASIC SKILLS ASSESSMENT PROGRAM WRITTEN COMMUNICATION SCORES

Variable	Multiple R	R^2	BETA	F	Significance
BSAP 3 Written Communication	.9980	.9961	1.00	8385.29	.000*
SAT 4 Language	.9983	.9966	-.059	5.40	.027*

*Significant at the .05 level

Table 4

PREDICTORS OF THE 1988 SIXTH GRADE STANFORD ACHIEVEMENT TEST READING SCORES

Variable	Multiple R	R^2	BETA	F	Significance
SAT 4 Reading	.8904	.7928	.89	126.25	.000*
BSAP 5 Reading	.9309	.8666	.44	17.69	.000*

* Significant at the .05 level

Table 5

PREDICTORS OF THE 1988 SIXTH GRADE STANFORD ACHIEVEMENT TEST MATH SCORES

Variable	Multiple R	R^2	BETA	F	Significance
BSAP 3 Math	.8799	.7742	.88	113.15	.000*
Level	.9063	.8215	.22	8.47	.007*

* Significant at the .05 level

Table 6

PREDICTORS OF THE 1988 SIXTH GRADE STANFORD ACHIEVEMENT TEST LANGUAGE SCORES

Variable	Multiple R	R^2	BETA	F	Significance
SAT 4 Language	.9539	.9100	.95	333.61	.000*
BSAP 5 Written Communication	.9600	.9217	.25	4.78	.036*

* Significant at the .05 level

Table 7

PREDICTORS OF THE 1988 EIGHTH GRADE BASIC SKILLS ASSESSMENT PROGRAM READING SCORES

Variable	Multiple R	R^2	BETA	F	Significance
BSAP 5 Reading	.9990	.9980	1.00	16499.17	.000*

*Significant at the .05 level

Table 8

PREDICTORS OF THE 1988 EIGHTH GRADE BASIC SKILLS ASSESSMENT PROGRAM MATH SCORES

Variable	Multiple R	R^2	BETA	F	Significance
BSAP 5 Math	.9981	.9961	1.00	8447.74	.000*

* Significant at the .05 level

Table 9

PREDICTORS OF THE 1988 EIGHTH GRADE BASIC SKILLS ASSESSMENT PROGRAM WRITTEN COMMUNICATION SCORES

Variable	Multiple R	R^2	BETA	F	Significance
BSAP 5 Written Communication	.9988	.9977	1.00	14258.67	.000*
SAT 6 Language	.9990	.9980	-.04	4.96	.033*

* Significant at the .05 level

Table 10

PREDICTORS OF THE 1988 ELEVENTH GRADE FUNCTIONAL LITERACY EXAMINATION READING SCORES

Variable	Multiple R	R^2	BETA	F	Significance
SAT 6 Reading	.4968	.2468	.50	10.81	.002*
Lunch	.6068	.3682	-.39	6.15	.019*

* Significant at the .05 level

Table 11

PREDICTORS OF THE 1988 ELEVENTH GRADE FUNCTIONAL LITERACY EXAMINATION MATH SCORES

Variable	Multiple R	R^2	BETA	F	Significance
BSAP 5 Math	.4778	.2283	.48	9.76	.004*
Lunch	.6319	.3994	-.50	9.11	.005*

* Significant at the .05 level

Table 12

PREDICTORS OF THE 1988 ELEVENTH GRADE FUNCTIONAL LITERACY EXAMINATION WRITTEN COMMUNICATION SCORES

Variable	Multiple R	R^2	BETA	F	Significance
SAT 6 Language	.4957	.2458	.50	10.75	.002*
Lunch	.6079	.3696	-.40	6.29	.017*
Level	.6692	.4478	-.30	4.39	.044*

* Significant at the .05 level

Summary

The purpose of this study was to determine if there was a correlation significantly different from zero between test scores, level of accreditation (Level 1 or Level 2), district expenditure per pupil, district size, and eligibility of students for free/reduced lunches as measure by the BSAP, the FLE, and the SAT. All three tests measured reading and math. The BSAP and the FLE measured written communication. The SAT measured language. The BSAP was administered in grades 3, 5, and 8, the FLE was administered in grade 11, and the SAT was administered in grades 4 and 6.

Overall, the results showed that the best predictor for reading was reading, the best predictor for math was math, and the best predictor for written communication or language was written communication or language. However, the second best predictor for the Functional Literacy Examination scores was the eligibility of student for free/reduced lunches in the district.

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